

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
13 January 2005 (13.01.2005)

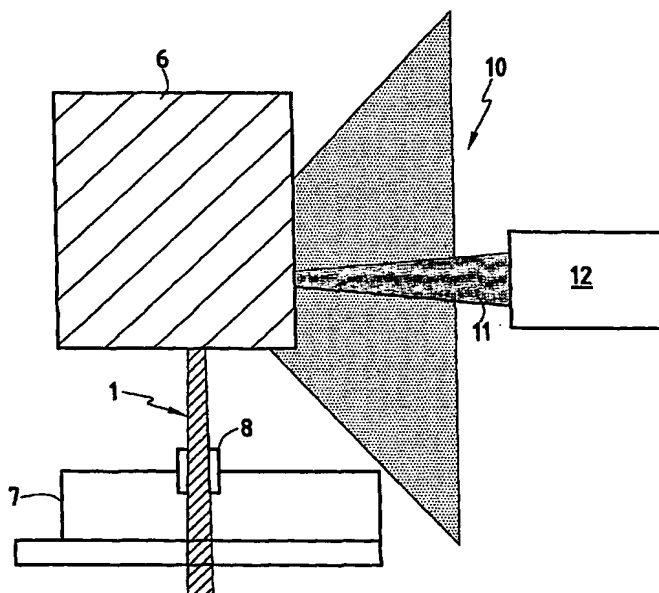
PCT

(10) International Publication Number
WO 2005/004555 A1

- (51) International Patent Classification⁷: **H05G 2/00**
- (21) International Application Number:
PCT/EP2003/009842
- (22) International Filing Date: 27 June 2003 (27.06.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (71) Applicant (for all designated States except US): **COMMISSARIAT ENERGIE ATOMIQUE [FR/FR]**; 31 Rue de la Fédération, F-75015 Paris (FR).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **SCHMIDT, Martin** [DE/FR]; Bât 7A, 16 Avenue Victor Hugo, F-92170 Vannes (FR). **LEBERT, Rainer-Helmut** [DE/BE]; Platzegel 21, B-4721 Kelmis (BE). **STAMM, Uwe** [DE/DE]; Calsowstrasse 37, 37085 Gottingen (DE).
- (74) Agents: **THEVENET, Jean-Bruno** et al.; Cabinet Beau de Lomenie, 158 Rue de l'Université, F-75340 Paris Cedex 07 (FR).
- (81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:
— with international search report

[Continued on next page]

(54) Title: METHOD AND DEVICE FOR PRODUCING EXTREME ULTRAVIOLET RADIATION OR SOFT X-RAY RADIATION



(57) Abstract: The device for generating extreme ultraviolet (EUV) or soft X-ray radiation comprises a laser source (12) for producing a laser radiation (11) which is focused to intensities beyond 10^6 W/cm² onto a target to produce a plasma and electrodes mounted on an electrically insulating block (6) and located around the path of the plasma produced by the laser source (12). The electrodes are combined with a device for producing a rapid electric discharge in the plasma with a characteristic time constant which is less than the time constant of the laser produced plasma expansion time.



For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.